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December 30, 1999

HAND DELIVERY

Ms. Magalie Roman Salas, Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, DC 20554

Re: 911 Call Processing Method That Includes Digital and Analog Modes Proposed by Nokia, Inc.
WT Docket No. 99-328

Dear Ms. Salas:

On December 20, 1999, the Wireless Consumers Alliance filed an *ex parte* letter in the above-captioned proceeding in which it makes a number of incorrect and misleading statements that Nokia wishes to correct. Nokia also is providing additional information so that the public and the Commission staff can better understand the clear public interest in granting our proposal to allow multi-mode wireless phones to complete emergency calls using both the analog and digital channels on which they are capable of operating. Grant of our request will increase the chances that a consumer in distress will be successful in quickly summoning emergency assistance using their multi-mode wireless phone.

In both its letter and its comments in this proceeding, the Alliance opposes allowing Nokia's multi-mode handsets to use both the digital and analog modes they are capable of operating on for emergency calls. This is a misguided position that will measurably lessen the chances of completing emergency 9-1-1 calls for *millions* of wireless subscribers. The result of

the Alliance's position would be that millions of multi-mode (including multi-band) handset users would be disadvantaged in using the full digital capabilities of their handsets when they are most desperate to complete 9-1-1 calls.

The letter from the Alliance opposing Nokia's request makes clear that its opposition is based upon mistakes in fact and technology. First, considering PCS at 1900 MHz, as the Commission is well aware, there were an estimated *six million plus* digital users in December, 1998, subscribing to wireless telephony services. These are not personal digital assistant, such as the Palm Pilot services, as the Alliance mistakenly states. They are full-fledged digital two-way telephony systems functionally similar to cellular systems. Both cellular and PCS systems may provide ancillary data services, but voice telephony is universally provided. One year ago -- in December, 1998 -- there existed up to 4 PCS systems constructed and in service in every urban area of the United States in the 1900 MHz PCS bands.[1]

Second, within the cellular (800 MHz) bands, digital systems are less crowded because digital systems acquire additional capacity through gains in efficiency. Consumers and carriers are converting to digital at an astounding pace to secure the price and service benefits of digital technology. The number of digital handsets grew at the annual percentage rate of 160 percent between 1997 and 1998.[2] And yet, despite this rapid migration to digital technology, the Alliance opposes Nokia's proposal that digital multi-mode phones quickly implement a 9-1-1 call completion method that complies with the Commission's intent when it adopted rules for analog systems.

In both its letter and its comments, the Alliance states that Nokia's proposal does nothing to address the "lock in" problem and that, in fact, Nokia's handsets would lock in to a system on which it failed to complete the emergency call.[3] This is not the case. Nokia's phones will be designed to combat lock-in in the same manner that the Commission has allowed for other call completion methods.

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1 These figures are for 1998, as set forth in the Commission's *Fourth Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, FCC 99-136, released June 24, 1999, at p. 31 and Table 10 at p. B-16.

2 *Id.* at Table 5, p. B-7.

3 Alliance Comments at 7; Letter at 2.

In the *Second Report and Order*, the Commission noted that any call completion method "should address the lock in problem in a reasonable and effective way that substantially reduces or eliminates the likelihood that a 911 call might be locked in on the system of a cellular carrier that is unable to provide a usable voice communication channel."[4] In its discussion of the approved Automatic A/B Roaming - Intelligent Retry Method, the Commission noted that the sequential algorithm procedure that the method employs, whereby the handset would automatically switch between the preferred and non-preferred cellular carriers after some set length of time if the call was not completed on one of the carriers, "effectively addresses the lock-in problem."[5] In addition, the Commission stated that the 17-second time limit it was mandating for the initial call attempt would "also provide additional protection against any lock-in of calls, beyond 17 seconds, with the preferred carrier."[6]

Nokia's multi-mode phones will employ several procedures that will eliminate the likelihood that a 9-1-1 call will be locked in to any one system. First, as with the Automatic A/B Roaming - Intelligent Retry Method, when operating in emergency call mode, Nokia's proposed call completion method will employ a sequential algorithm whereby the handset will automatically attempt the call on another system if the call is not completed on one system. Moreover, if for some reason a system is lost while the handset is operating in emergency mode, the phone will remember the system on which the previous access attempt was made and it will then attempt to complete the call on the next available system. This will help to ensure that the phone will not continually seek to attempt to complete the call on a system that it cannot access.

Second, Nokia would like to clarify that our multi-mode handsets will comply with the time limits for access attempts approved by the Commission for the Automatic A/B Roaming - Intelligent Retry Method.[7] In the *Second Report and Order*, the Commission stated that "the

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[4] *Revision of the Commission's Rules to Ensure Compatibility with Enhanced E-911 Emergency Calling Systems,* Second Report and Order, 14 FCC Rcd 10954 at para. 29 (1999) ("*Second Report and Order*").

[5] *Id.* at para. 35.

[6] *Id.* at para. 41.

[7] In our initial letter requesting approval of our multi-mode call completion method we stated that the time per access attempt for digital systems was controlled by the carrier and thus could exceed 17 seconds. However, this time control is part of the digital standards and is not a bar to a handset moving from one channel to another within a predetermined amount of time. In fact, as noted above and recognizing the Commission's concern about unnecessary delays in emergency call set-up times, Nokia will modify its multi-mode handsets to switch to a subsequent system if the call cannot be completed within 17 seconds if the Commission approves its request.

handset should seek to complete the call with the non-preferred cellular carrier if the preferred cellular carrier has not successfully delivered the call to the landline carrier within 17 seconds after the call is placed."[8] We will apply the same time limit for all channels irrespective of whether the handset is operating in the digital or the analog mode. This means that at a maximum our multi-mode handsets will try to complete a call on a channel (digital or analog, cellular 800MHz or PCS 1900 MHz) for 17 seconds before attempting to complete the call on the next channel.

These steps will substantially reduce any chance that our multi-mode handsets could "lock in" on any one system, and will substantially reduce the time necessary for call set up and completion. In addition, Nokia wishes to clarify and correct for the record a concern raised by the Alliance. In its comments, the Alliance stated that handsets employing our proposed method would spend "an impermissibly long time" trying to access systems that the phone is capable of operating on.[9] However, this reflects a misunderstanding of how our handsets operate to determine whether a channel can be used or not. Rather than spending approximately 10 seconds to make a determination if it may operate on a given channel, the handset makes a quick scan of all channels it is capable of operating on. The amount of time needed to tune the synthesizer to the channel is typically in the range of 20-30 milliseconds. Thus in a worst case, the handset will scan for 42 potential PCS channels and 4 potential 800 MHz digital channels for a total of 46 digital channels, with each of these scans taking a maximum of 30 milliseconds, for a total of 1.380 seconds, before a channel is found. Once the handset has found an available channel (based on RSSI), it will attempt to complete the call immediately. As we stated before, all negative preferences will be overridden.

Nokia is committed to ensuring that consumers using our multi-mode phones are able to contact 9-1-1 rapidly. Our proposal has the advantage of allowing for relatively rapid rollout of these increased capabilities, whereas otherwise consumers would not have them. For reasons that truly are baffling, the Alliance advocates a position that in some instances will delay or even prevent a connection to 9-1-1 where it could be rapid and reliable using digital handset capabilities. Granting the Nokia request will have clear substantial benefits to the public in the increasingly digital world, and we reiterate our request for grant of permission to implement this capability at the soonest possible time.

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8 *Second Report and Order* at para. 41.

9 Alliance Comments at 8.

As we noted in our original request, it will take 4 months to implement this new 9-1-1 call completion method, and therefore expedited action was requested. That was on October 27, and referred to the Feb. 13 deadline. We therefore are filing concomitant with this reply a request for waiver of the February 13 deadline for 4 months from Commission action on this request. We request expeditious grant so as to minimize the time necessary beyond February 13.

Respectfully Submitted,

David R. Siddall, Esq.
Counsel to Nokia, Inc.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that, on this 30th day of December, 1999, I caused copies of the foregoing document to be served by first-class U.S. mail to the following:

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